

DuPont QP165

COPPER CONDUCTOR

Technical Data Sheet

Product Description

DuPont QP165 is a screen printable, nitrogen fireable copper conductor composition. It is used as a overprint conductor in high density multilayer ceramic printed wiring boards. It provides excellent solderability without burnishing when printed over other DuPont copper conductors. It should not be used alone as a top layer conductor on dielectric or directly on alumina.

Processing

Printing

A 325 mesh stainless steel screen with a 10-15 μ m (0.4 - 0.6 mil) emulsion thickness is recommended. Printing speeds up to 20 cm/s (8 in/s) can be used.

Drying

Allow the wet print to level for 5–10 minutes at room temperature. Dry 10–15 minutes at 120°C in a nitrogen atmosphere. Care must be taken, however, to ensure that the prints return to room temperature before being exposed to air to avoid oxidation.

Firing

Dried prints of DuPont QP165 should be fired in a belt furnace with a nitrogen atmosphere containing less than 10 ppm oxygen. Use a 55 minute profile with a peak temperature of 900°C for 10 minutes.

Typical Physical Properties

| Test | Properties |
|---|--|
| Viscosity (Pa.s) (Brookfield HBT, UC&SP, 10 rpm, 25°C) | 200-300 |
| Thinner | DuPont 9450 |
| Coverage (cm ² /g) | 70 - 80 (11 - 13 in ² /g) |
| Solder Acceptance | Excellent, using 63Sn/37Pb at 240°C and Alpha 611 flux |

This table shows anticipated typical physical properties for DuPont QP165 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Storage and Shelf Life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and Handling

For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

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